United States Department of Agriculture
Cooperative State Research, Education, and Extension Service,
Office of the Administrator

Annual Review for 2006

Portfolio 5.1 (New Forests and Rangelands)

Supporting Objective: Provide science-based knowledge and education to improve the management of forests and rangelands

CSREES *Goal: Protect and Enhance the Nation's Natural Resource Base and Environment*

For the period 1999-2004

2004 INTERNAL REVIEW PORTFOLIO: STRATEGIC OBJECTIVE 5.1
(Objectives 6.3 and 6.4 in CSREES Strategic Plan 2007-2012)

Forests and Rangeland

Response to External Review Panel Recommendations from February 2005

and

Progress Report

through FY 1999 and FY 2004

August, 2006

INTERNAL REVIEW PORTFOLIO: STRATEGIC GOAL 5.1

I. Background

This document was prepared in August 2006 as the internal review of Strategic Goal 5.1 for Fiscal Year 2004. It contains updates to the portfolio, responses to the comments of the external panel review and changes to criteria scores with accompanying justifications. This document is a result of the efforts of the National Program Leaders from the Natural Resources and Environment Unit in collaboration with CSREES Planning and Accountability.

- **The following knowledge areas (KAs) are included in Portfolio 5.1.**

    o 121: Management of Range Resources
    o 122: Management and Control of forest and range fires
    o 123: Management and sustainability of Forest Resources
    o 124: Urban Forestry
    o 125: Agroforestry
    o 135: Aquatic and Terrestrial
    o 136: Conservation of Biological Diversity

- **Portfolio reviews:**

    February 15-17, 2005 (external panel)
    August 2006 (internal Agency review)

- **Portfolio score from the PREP in 2005:**

Portfolio 5.1 received an overall score of 77 from the panel in the 2005 PREP. Table I-2 below shows the breakdown of scores for different questions and criteria.

Table I-2. Scoring of 5.1 PREP Expert Panel			
Criteria	**Recommendations**	**Previous Score**	**Current Score**
Relevance			
1. Scope	Include information deliberate reallocation of resources in the future	3	3
2. Focus	Strengthen partnerships with 1890 and 1994 institutions	2	2
3. Emerging Issues	Continue process of identifying emerging issues by identifying "emerging stakeholders"	2	2.5
4. Integration	Strengthen relationship between LGU partners and NPLs	2	2
5. Multi-disciplinary	Increase regional data collection and integration among social and policy sciences	2	2

Table I-2. Scoring of 5.1 PREP Expert Panel			
Criteria	**Recommendations**	**Previous Score**	**Current Score**
Quality			
1. Significance	Implement formative evaluations and allocate real resources to highlight program implementation successes and challenges	2	2.5
2. Stakeholder	Persevere in efforts to connect and collaborate with other federal agencies	2	2
3. Alignment	Focus on achieving sustainable ecosystems, avoid focusing on one particular component of an ecosystem	2	2
4. Methodology	Create a systematic review process for extension and included stakeholders for a more proactive approach to accountability and assessment	2	2
Performance			
1. Productivity	Include more national and state level extension outputs in portfolio.	3	3
2. Comprehensiveness	Stabilize human and fiscal resources	2	2
3. Timeliness	Reasonable proportion of no-cost extensions	3	2
4. Agency guidance	NPLs should increase regional and national level of leadership for program development	2	3
5. Accountability	Improve documentation of outcomes and impacts at both federal and the LGU levels	2	2
Overall score		**77**	**82**

- **A brief summary of the PREP report with the panel's specific recommendations:**

The panel found that the people of CSREES NRE make a significant difference and add considerable value to the work of both the agency and the partnership. The evidence presented in this portfolio reflects hard work and indicates high levels of productivity. There is evidence of increasing emphasis on integration and that CSREES staffs are becoming more creative and determined about planning and reporting as forms of accountability.

The panel recommends continued effort in partnerships with 1890 and 1994 institutions. Many opportunities exist for programming on critical issues, expanding urban track issues and the issue of wildlife-urban interface. National needs can often be met by working in international collaborations and contexts.

The panel suggests that the partnership continue to expand interactions with stakeholders to include "emerging stakeholders." It is as important for planning processes to identify new stakeholders and partners as it is for the process to identify emerging issues and priorities. Further, players throughout the partnership should examine all federal reports across states within program areas in order to document the synergistic effect of integrated funding on levels of research, education and extension productivity.

There is a need to standardize and expand the documentation and evaluation metrics across program areas and increase the archiving and accessibility of research project data (in the CRIS and other systems). This is necessary in order to permit meta-analysis of the data.

The panel recommends training on the logic model for agency employees and external and internal partners. Instead of just evaluating past performance, the panel also suggests developing strategic plans for each problem area and increasing stakeholder contributions by including panel members and other stakeholders in the development and review of CSREES strategic plans at the portfolio level.

Finally, the panel suggests increasing the documentation of outcomes. Formative evaluations to document program implementation successes and challenges should be performed.

II. CSREES response to PREP recommendations that cross all portfolios

In response to directives from the Office of Management and Budget (OMB) of the President, CSREES implemented the Portfolio Review Expert Panel (PREP) process to systematically review its progress in achieving its mission by implementing the Portfolio Review Expert Panel (PREP) process. Since this process began in 2003 eleven expert review panels have been convened and each has published a report offering recommendations and guidance.

These external reviews occur on a rolling five year basis. In the four off-years an internal panel is assembled to examine how well CSREES is addressing the external panel's recommendations. These internal reports are crafted to specifically address the issues raised for a particular Portfolio. However, despite the fact that the external reports were all written independent of one another on Portfolios comprised of very different subject matter, several themes common to the set of review reports have emerged. This set of issues has repeatedly been identified by Portfolio Review Panels and requires an agency-wide response. The agency has taken a series of steps to effectively respond to those overarching issues.

Issue I: Getting Credit When Credit is Due

For the most part panelists were complimentary when examples showing partnerships and leveraging of funds were used. However, panelists saw a strong need for CSREES to better assert itself and its name into the reporting process. Panelists felt that, often times, principal investigators who conduct the research, education and extension activities funded by CSREES do not highlight the contributions made by CSREES. Multiple panel reports suggested CSREES better monitor reports of its funding and ensure that the agency is properly credited. Many panelists were unaware of the breadth of CSREES activities and believe their lack of knowledge is partly a result of CSREES not receiving credit in publications and other material made possible by CSREES funding.

Agency Response:
In 2005, in an effort to address the issue of lack of credit being given to CSREES for funded projects, the Agency implemented several efforts likely to improve this situation.

First it developed a standard paragraph about CSREES's work and funding that project managers can easily insert into documents, papers and other material funded in part or entirely by CSREES. Second, the Agency is in the process of implementing the "One Solution" concept. The One Solution will allow for the better integration, reporting and publication of CSREES material on the web. In addition, the new Plan of Work, centered on the Logic Model framework, became

operational in June 2006. The Logic Model framework is discussed in more detail below. Because of the new Plan of Work requirements and the Plan of Work Training conducted by the Office of Planning and Accountability (also described in more detail below), it will be simpler for state and local partners to line up the work they are doing with agency expenditures. This in turn will make it easier for project managers to cite CSREES contributions when appropriate.

Issue II: Partnership with Universities

Panelists felt that the concept of partnership was not being adequately presented. Panelists saw a need for more detail to be made available. Questions revolving around long-term planning between the entities were common as were ones that asked how the CSREES mission and goals were being supported through its partnership with University partners and vice versa.

Agency Response:
CSREES has taken several steps to strengthen its relationship with University partners. First, to the extent possible, implementing partners will be attending the CSREES strategic development exercise which is intended to help partners and CSREES fully align what is done at the local level. Second, CSREES has realigned the state assignments for its NPLs. Each state is now assigned to one specific NPL. By reducing the number of states on which any individual NPL is asked to concentrate and assigning and training NPLs for this duty, better communication between state and NPL leaders should occur. Finally, several trainings that focused on the POW were conducted by CSREES in geographic regions throughout the country. A major goal of this training was to better communicate CSREES goals to state leaders which will facilitate better planning between the universities and CSREES.

Issue III: NPLs

Without exception the portfolio review panels were complimentary of the work being done by NPLs. They believe NPLs have significant responsibility, are experts in the field and do a difficult job admirably. Understanding the specific job functions of NPLs was something that helped panelists in the review process. Panelists did however mention that often times there are gaps in the assignments given to NPLs. Those gaps leave holes in programmatic coverage.

Agency Response:
CSREES values the substantive expertise National Program Leaders bring to the Agency and therefore requires all NPLs to be experts in their respective fields. Given the budget constraints often faced by the agency, the agency has not always been able to fund needed positions and had to prioritize its hiring for open positions. In addition, because of the level of expertise CSREES requires of its NPLs, filling vacant positions quickly is not always possible. Often CSREES is unable to meet the salary demands of those it wishes to hire. It is essential that vacant positions not only be filled but with the most qualified candidate.

Operating under these constraints and given inevitable staff turnover, gaps will always remain. However, the establishment and drawing together of multidisciplinary teams required to complete the Portfolios has allowed the Agency to identify gaps in program knowledge and ensure that these needs are addressed in a timely fashion. To the extent that specific gaps are mentioned by outside panel experts heightens the urgency to fill them.

Issue IV: Integration

Lack of integration has been highlighted throughout the panel reviews. While review panelists certainly noted in their reports where they observed instances of integration, panel reports almost without fail sought more documentation in this regard.

Agency Response:
Complex problems require creative and integrated approaches that cut across disciplines and knowledge areas. CSREES has recognized that need and has undertaken steps to remedy this situation. CSREES has recently mandated that up to twenty percent of all NRI funds be put aside specifically for integrated projects. These projects cut across functions as well as disciplines and ensure that future Agency work will be better integrated. Finally, integration is advanced through the Portfolio process which requires cooperation across units and programmatic areas.

Issue V: Extension

While most panels seemed satisfied at the level of discussion that focused on research, the same does not hold true for extension. There was a call for more detail and more outcome examples based upon extension activities. There was a consistent request for more detail regarding not just the activities undertaken by extension but documentation of specific results these activities achieved.

Agency Response:
Outcomes which come about as a result of Extension are, by the very nature of the work, more difficult to document than the outcomes of a research project. CSREES has recently shuffled its strategy of assigning NPLs to serve as liaisons for states. In the past one NPL might serve as a liaison to several states or a region comprised of states. Each state will be assigned a specific NPL and no NPL will serve as the lead representative for more than one state. This will ensure more attention is paid to Extension activities.

In addition CSREES has also been in discussion with partners and they have pledged to do their best to address this issue. The new POW will make Extension based results and reporting a priority. With heavy emphasis being place on logic models by CSREES, this will have the effect of necessitating the inclusion of Extension activities into the state's POWs. This in turn will require more reporting on Extension activities and allow for the improved documentation of Extension impact.

Issue VI: Program Evaluation

Panelists were complimentary in that they saw the creation of the Office of Planning and Accountability and portfolio reviews as being the first steps towards more encompassing program evaluation work. However, they emphasized the need to see outcomes and often times stated that the scores they gave were partially the result of their own personal experiences rather than specific program outcomes documented in the portfolios. In other words, they know first hand CSREES is having an impact but would like to see more systematic and comprehensive documentation of this impact in the reports.

Agency Response:

The effective management of programs is at the heart of the work conducted at CSREES and program evaluation is an essential component of effective management. In 2003 the Portfolio Review Expert Panel and subsequent internal reviews was implemented. Over the past three years eleven portfolios have been reviewed by external panel members and each year this process improves. National Program Leaders are now familiar with the process and the staff of the Planning and Accountability unit has implemented a systematic process for pulling together the material required for these reports.

However, simply managing the process more effectively is not sufficient for raising the level of program evaluations being done on CSREES funded projects to the highest standard. Good program evaluation is a process that requires constant attention by all stakeholders and the agency has focused on building the skill sets of stakeholders in the area of program evaluation. The Office of Planning and Accountability has conducted trainings in the area of evaluation for both National Program Leaders and for staff working at Land grant universities. These trainings are available electronically and the Office of Planning and Accountability will be working with National Program Leaders to deliver these trainings to those in the field.

The Office of Planning and Accountability is working more closely than ever with individual programs to ensure successful evaluations are developed, implemented and the data analyzed. Senior leadership at CSREES has begun to embrace program evaluation and over the coming years CSREES expects to see state leaders and project directors more effectively report on the outcomes of their programs as they begin to implement more rigorous program evaluation. The new Plan of Work system ensures data needed for good program evaluation will be available in the future.

Issue VII: Logic Models

Panelists were consistently impressed with the logic models and the range of their potential applications. They expressed the desire to see the logic model process used by all projects funded by CSREES and hoped not only would NPL's continue to use them in their work but, also, that those conducting the research and implementing extension activities would begin to incorporate them into their work plans.

Agency Response:
Logic models have become a staple of the work being done at CSREES and the Agency has been very proactive in promoting the use of logic models to its state partners. Two recent initiatives highlight this. First, in 2005, the Plan of Work (POW) reporting system into which states submit descriptions of their accomplishments was completely revamped. The new reporting system now closely matches the logic models being used in Portfolio reports. Beginning in Fiscal year 2007 states will be required to enter all of the following components of a standard logic model. These components include describing the following:

- Program Situation
- Program Assumption
- Program Long Term Goals
- Program Inputs which include both monetary and staffing
- Program Output which include such things as patents
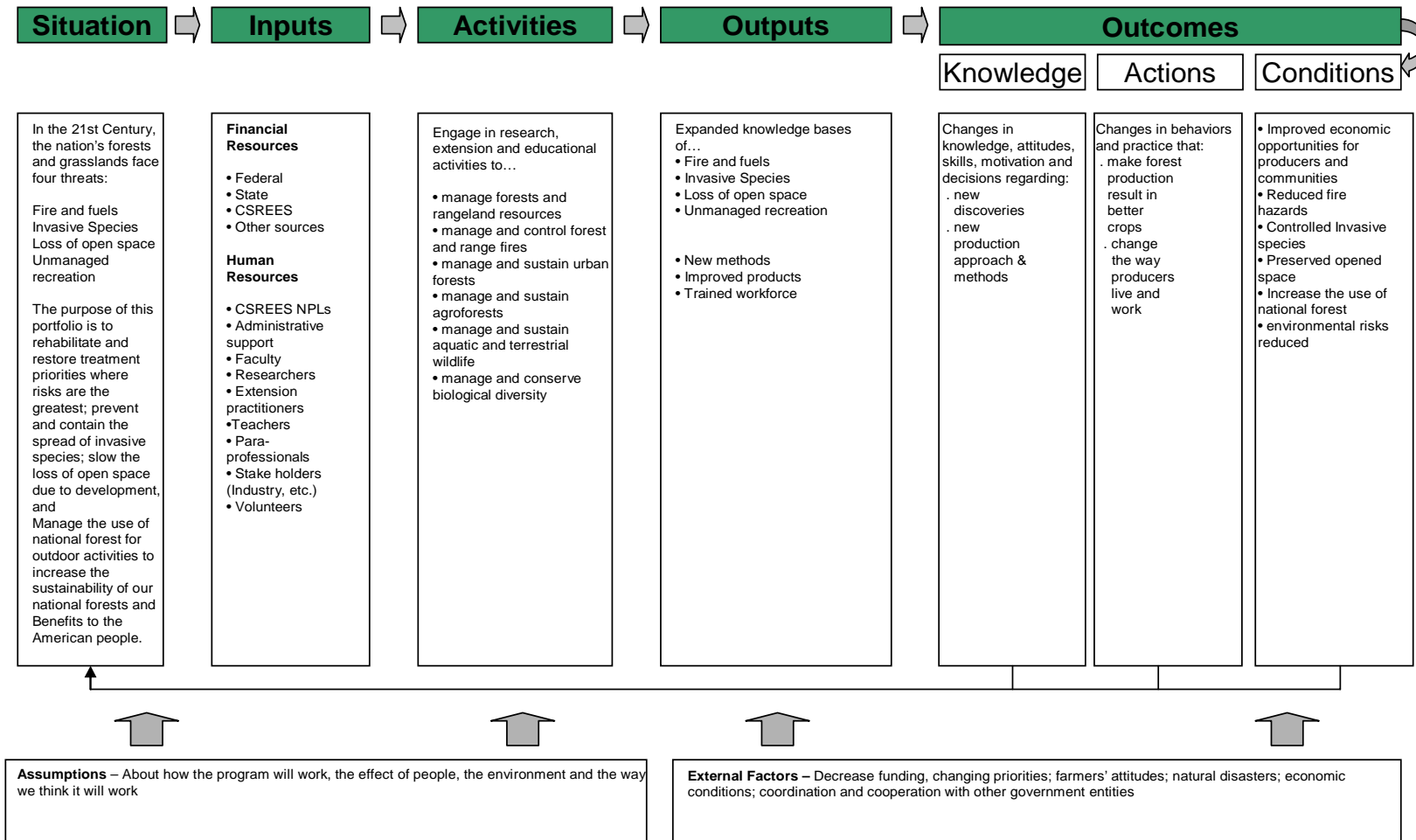- Short Term Outcome Goals

- Medium Term Outcome Goals
- Long Term Outcome Goals
- External Factors
- Target Audience

The system is now operational and states are started using it June, 2006. By requiring the inclusion of the data components listed above, states are in essence, creating a logic model which CSREES believes will help better improve both program management and outcome reporting.

The second recent initiative by CSREES regarding logic models concerns a set of trainings conducted by Planning and Accountability staff. In October and November of 2005 four separate training sessions were held in Monterrey, California, Lincoln, Nebraska, Washington D.C. and Charleston, South Carolina. More than two hundred people representing land grant universities attended these trainings where they were given training in logic model creation, program planning and evaluation. Additionally, two training sessions were provided to NPLs in December 2005 and January 2006 to further familiarize them with the logic model process. Ultimately it is hoped these representatives will pass on to others in the land grant system what they learned about logic models thus creating a network of individuals utilizing the same general approach to strategic planning. These materials have also been made available to the public on the CSREES website.

CSREES Portfolio: Management of Forest and Rangelands Logic Model

Situation ➡ **Inputs** ➡ **Activities** ➡ **Outputs** ➡ **Outcomes**

				Knowledge	Actions	Conditions

Situation	Inputs	Activities	Outputs	Knowledge	Actions	Conditions
In the 21st Century, the nation's forests and grasslands face four threats: Fire and fuels Invasive Species Loss of open space Unmanaged recreation The purpose of this portfolio is to rehabilitate and restore treatment priorities where risks are the greatest; prevent and contain the spread of invasive species; slow the loss of open space due to development, and Manage the use of national forest for outdoor activities to increase the sustainability of our national forests and Benefits to the American people.	**Financial Resources** • Federal • State • CSREES • Other sources **Human Resources** • CSREES NPLs • Administrative support • Faculty • Researchers • Extension practitioners • Teachers • Para-professionals • Stake holders (Industry, etc.) • Volunteers	Engage in research, extension and educational activities to… • manage forests and rangeland resources • manage and control forest and range fires • manage and sustain urban forests • manage and sustain agroforests • manage and sustain aquatic and terrestrial wildlife • manage and conserve biological diversity	Expanded knowledge bases of… • Fire and fuels • Invasive Species • Loss of open space • Unmanaged recreation • New methods • Improved products • Trained workforce	Changes in knowledge, attitudes, skills, motivation and decisions regarding: . new discoveries . new production approach & methods	Changes in behaviors and practice that: . make forest production result in better crops . change the way producers live and work	• Improved economic opportunities for producers and communities • Reduced fire hazards • Controlled Invasive species • Preserved opened space • Increase the use of national forest • environmental risks reduced

Assumptions – About how the program will work, the effect of people, the environment and the way we think it will work

External Factors – Decrease funding, changing priorities; farmers' attitudes; natural disasters; economic conditions; coordination and cooperation with other government entities

Version 1.2

III. National Program Leader's response to PREP recommendations regarding portfolio 5.2

The NPLs responsible for portfolio 5.1 identified the following set of issues that were specifically raised within the 5.1 portfolio review and prepared the following set of responses.

Relevance

1. Although evidence demonstrated some expansion of the scope of programming, the panel was unable to ascertain any reallocation of resources from terminated programs to emerging programs. Resource allocation has been inconsistent among knowledge areas.

   - The Renewal Resources Extension Act (RREA) program, through the National Focus Funds, awarded a grant to University of Georgia to develop a national extension program template to address the issue of forest fragmentation, parcelization and conversion. This represents an expansion beyond typical programs, issues and audiences that heretofore comprised the RREA program conducted by 72 institutions. This is an emerging issue for the nation's private forest lands and is one that requires attention by locally elected and appointed officials who make land use decisions. This is a reallocation of funds from a program with a traditional focus to an issue of contemporary importance.

2. Some knowledge areas suffer from an antiquated scientific knowledge base reflecting variation in staffing levels and in reporting regional and state priorities.

   - The input stakeholders towards the development of requests for applications and in the development of programs have been a priority for all NRE programs. NPL's use any opportunity while attending meetings and conferences to solicit input on a formal and informal basis.

3. Lack of attention directed towards under-served and urban populations.

   - The Water Quality Program has a focused effort to address the needs of urban populations through its Agriculture Water Security initiative.
   - The Renewable Resources Extension Act Strategic Plan identifies "Diverse Audiences" as an issue of strategic importance. National program reporting indicators have been developed and RREA institutions will be expected to report on the composition of their audiences.

4. More leadership by NPLs, as well as LGU leaders in facilitating strategic planning and resource allocation.

   - Several National Programs Leaders with natural resources and environmental portfolios are engaged with the NRI process in strategic planning and resource allocation under competitive programs.
   - The ECOP Forestry Task Force along with NPL's provided strategic guidance for the RREA program by reviewing current issues that necessitate an education

approach, how the funds are allocated, and making recommendations for investments in projects of nationwide importance via the National Focus Funds.

- The ECOP Forestry Task Force published an RREA strategic plan for FY 2005-2009 in April 2004. The plan was a direct outcome of a strategic planning effort that involved nearly 100 people from more than 45 land grant universities. The plan is unique in that it provides focused, strategic direction for a formula-funded program that heretofore was conducted across a very large range of issues with little focus.
- In May 2004 the ECOP Forestry Task Force and NPL's conducted an RREA Workshop to introduce, review and discuss the strategic plan: implications for changing existing programs, how to implement the plan with no additional funding likely, and the potential for partnerships with NGO's and others.
- Widespread use of logic models in strategic planning of natural resources and environmental portfolios.
- Mandatory meetings of principal investigators with National Program Leaders for programs funded under the National Research Initiative.

5. Expand stakeholder community to include "emerging stakeholders".

- The input stakeholders towards the development of requests for applications and in the development of programs have been a priority for all NRE programs. NPL's use any opportunity while attending meetings and conferences to solicit input on a formal and informal basis.

6. Documentation of the higher education programs and its integration with research and/or extension was missing from the report.

- Several new collaborations with SERD including a program called " Opportunities for NRI Grantee Participation in HSI Higher Education Programs" that is designed to bring the best researchers working in the agricultural sciences together with populations that are among those most in need of exposure to that research—i.e., students and faculty from Hispanic Serving Institutions (HSI) that have not had exposure to scientific research in the agricultural sciences, nutrition, engineering, and technology fields.

7. Increased integration with social and policy sciences.

- The Global Change and Climate program has conducted joint solicitations with other federal agencies emphasizing societal impacts of land-use and land-cover change and management strategies for carbon mitigation.
- New use of "agroecology," as an overarching theme in the NRI and in ENR to integrate agricultural, natural and human components. Agroecology explicitly includes humans as an integral part of the system, not something apart from it. The ability to study, design, manage, evaluate and understand such hybrid systems requires an integrated, long-term, and interdisciplinary examination of biogeochemistry, energy transformations, biological processes and socio-economic relationships. Viewing agriculture as part of an ecological system as well as a human dominated socio-economic system produces a broad range of performance criteria

including ecological goods and services, sustainability, food security, economic viability, resource conservation, social equity, as well as increased production.

Quality

1. Real resources should be allocated for program evaluation at all levels of the partnership.

   - The RREA strategic plan, published in April 2004, includes specific short, intermediate, and long term performance measures for each of the strategic issues. Planning for a workshop to develop specific indicators for each measure is currently underway and will be conducted in June, 2005.

2. Critical needs rationale ought to be based on achieving sustainable ecosystems, not sustaining any particular component of an ecosystem.

   - The Global Change and Climate Program funds projects using a system science approach for addressing issues of carbon sequestration and land-use management for sustainable agriculture and resources conservation.
   - Long Term Agroecosystem Program (LTAR) would use systems science to test the degree to which agriculture can be ecologically and economically sustainable, a critically important goal that clearly falls within the domain of the USDA.

3. Recommend implementation of volunteer programs, on-line formats and interactive teaching methods as appropriate for target audiences in extension program development and delivery.

   - eXtension will address the national need for an electronic-based system of extension tools for delivery of educational and research products to the stakeholder community.

4. Include stakeholders in the development and/or review of strategic program planning and priority setting, rather than retroactive accountability and assessment.

   - The Global Change and Climate Program adopted the US Climate Change Science Strategic Plan which undertakes periodic consultation with a broad community of stakeholders in formulating its activities and in the development of synthesis and assessment products for the community.

Performance

1. Portfolio does not include extension outputs known to the panel. Increased frequency and quality of reporting at national and state levels would enhance the impact in reporting. Increase the documentation of outcomes.

   - This is addressed by the agency as Issue V above.

2. Leadership, management and guidance are variable in certain knowledge areas and may be attributed to low staffing levels.

- NRE to add new NLP positions in range and grassland;

3. Recommended that NPLs allocate a higher proportion of time to leadership for program development and less to program management and maintenance.

- NRE to create new Program Specialist Position to provide administrative support.

4. Recommended that NPLs read sections of all state reports in their programmatic and related areas to identify replicated and synergistic projects. This will also provide integration across the system.

- More involvement of more NPLs in cross-cut budget analyses

Future Directions

1. Use as a performance indicator "preserve, enhance and restore natural biodiversity to levels compatible with societal use of natural resources.

- The Biology of Weedy and Invasive Plants Program was converted to Biology of weedy and Invasive Species to cover a broader set of issues involving agroecology, ecosystems and invasive species.

2. Standardize and expand documentation and evaluation metrics across program areas.

- Under the enr strategic planning process, metrics will be defined consistently across the knowledge areas to better address outputs and outcomes.

3. Develop strategic plans for each knowledge area.

- Under the enr strategic planning process, knowledge areas will be tied directly to strategic goals and all enr programs will address common issues that cut-across disciplines and national needs.

IV.   Updates of the self-assessment paper

1. Budget

There was a slight decrease in the total CSREES funding for the portfolio relative to 2003. Most individual programs in 2004 were generally funded at the same level relative to 2003 except for a decrease in funding for Knowledge Area 123 (Management and Sustainability of Forest Resources). This decrease accounts for the general decrease in funds for the portfolio in 2004 and reflects the

reallocation of funds by the agency from this portfolio to other programs. This was a result of fewer fundable projects (10% less than the previous year, equivalent to $3M decrease in funds) for this knowledge area. This also accounts for the major decrease in NRI funds for the portfolio as these funds were competitive in nature. A decrease in State Appropriations also occurred in 2004 which reflects the general decline in research funding by all states except Georgia and Wyoming. This was slightly offset by an increase in other USDA and non-federal sources of funds. Knowledge Area 136 (Conservation of Biological Diversity) although presented in this portfolio was not used as a classification until 2005 and projects under this KA were included in other KA's in the portfolio.

Table 1: CSREES Research Funding for Portfolio 5.1 by Source during 1999-2004

Funding Source	Fiscal Year *(in thousands)*						
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**Grand Total**
Hatch	4,310	4,549	4,499	3,995	4,219	4,278	**25,850**
McIntire-Stennis	11,932	11,756	11,903	10,877	11,410	11,285	**69,163**
Evans Allen	1,174	884	1,103	525	460	401	**4,547**
Animal Health	26	26	6	4	11	11	**84**
Special Grants	1,911	2,447	2,460	3,896	4,612	4,851	**20,177**
NRI Grants	3,804	2,720	3,176	2,367	5,103	881	**18,051**
SBIR Grants	128	500	612	547	1,206	2,066	**5,059**
Other CSREES	2,224	10,500	8,479	1,297	3,187	2,690	**28,377**
Total CSREES	**25,509**	**33,382**	**32,238**	**23,508**	**30,208**	**26,463**	**171,308**

Source: Current Research Information Sources

Table 2: Funding from All Sources for Portfolio 5.1 during 1999-2004

Sources of funding	Fiscal Year *(in thousands)*						
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**Grand Total**
CSREES	25,511	33,381	32,238	23,507	30,208	26,462	**171,307**
Other USDA	10,923	12,124	13,224	18,257	12,789	14,662	**81,979**
Other Federal	32,130	34,902	38,123	80,158	32,142	32,925	**250,380**
State Appropriations	78,738	87,049	89,130	95,639	62,672	58,961	**472,189**
Private or Self Generated	8,439	10,033	12,070	10,101	6,031	6,327	**53,001**
Industry Grants and Agreements	10,745	11,752	14,499	19,232	12,994	12,085	**81,307**
Other non-federal	27,169	27,721	25,983	29,689	15,996	17,536	**144,094**
Grand Total	**193,655**	**216,962**	**225,267**	**276,583**	**172,832**	**168,958**	**1,254,257**

Source: Current Research Information Sources

Table 3: CSREES Funding for Portfolio 5.1 by Knowledge Area during 1999-2004

Knowledge Area	Fiscal Year ($ in thousands)						
	1999	2000	2001	2002	2003	2004	Grand Total
121- Management of Range Resources	2,222	3,766	6,039	2,384	3,376	3,402	**21,189**
122- Management and Control of Forest and Range Fires	410	527	2,515	957	1,450	2,149	**8,008**
123- Management and Sustainability of Forest Resources	14,921	16,691	15,005	12,187	16,679	13,109	**88,592**
124- Urban Forestry	617	525	861	1,056	889	937	**4,885**
125- Agroforestry	526	4,978	968	1,598	1,796	1,842	**11,708**
135- Aquatic and Terrestrial Life	6,814	6,893	6,850	5,325	6,019	5,024	**36,925**
135- Conservation of Biological Diversity	0	0	0	0	0	0	**0**
Total	**25,510**	**33,380**	**32,238**	**23,507**	**30,209**	**26,463**	**171,307**

Source: Current Research Information Sources

2. The Environmental and Natural Resources Enterprise

The Natural Resources and Environment (NRE) Unit of CSREES is responsible for the implementation of Strategic Goal 5.1. The unit realized even before the portfolio review the need to better address its environmental and natural resources function of the agency. This function goes beyond that of the NRE Unit and involves all National Program Leaders (NPLs) who have a background in environmental and natural resources issues and have personal interest, skills knowledge and experience in the area. The idea was not to reorganize the agency but to work within the administrative bounds in ways that enhance CSREES's effectiveness in dealing with its mission to serve the public and its partners. In 2003, National Program Leaders from NRE and other units of CSREES got together to envision the Environmental and Natural Resources (ENR) Enterprise. The development of ENR is undergoing rapid development especially in light of the PART of strategic goals 5.1 and 5.2.

The challenge for the Environmental and Natural Resources Enterprise is to increase the knowledge necessary to mitigate or adapt to the potential magnitude of environmental changes and their feedbacks in agricultural, forestry and rangeland ecosystems to help society respond effectively. Research, educational and extension activities for this initiative would focus on the complexity of changes in ecosystem processes and their frequency and intensity, particularly those that have significant consequence for society. These activities will enable society to better protect its natural resources and environment for societal needs. The national program leaders from the NRE unit and other natural resources and environment programs within CSREES are identifying and apriority research topics in support of an ENR working plan and develop a common goal that is implementable across the various programs. The agroecosystem, as an organizing theme for the ENR Enterprise, can be applied at a range of spatial scales including the field, family, the farm level enterprise, the landscape, watershed, institutional or community scale within agricultural, rangeland, forested, or community systems. A logic model of an agroecosystem upon which all ENR programs and linkages can be mapped and their linkages defined is presented below. Viewing agriculture as part of an ecological system as well as a human dominated socio-economic system produces a broad

range of performance criteria including ecological goods and services, sustainability, food security, economic viability, resource conservation, social equity, as well as increased production.

Successful research education and extension activities for the ENR Enterprise requires collaboration from within CSRESS, USDA and across other federal agencies but more so from the partnerships with the Land Grant Universities. This is needed to address the scientifically important and socially relevant issues facing government and society. This is also important in meeting goal 5 of CSREES' strategic plan in an integrated and holistic manner and over time will address all the issues raised in the PART review.

V.   2004 score changes for portfolio 5.1

After evaluating all the updated information of the portfolio up to 2004, the national program leaders have identified three categories where significant progress have been identified that justifies changes in score.

1) <u>Relevance, Emerging Issues</u>: The Renewable Resources Extension Act (RREA) Program represents an expansion beyond typical programs, issues and audience and identifies "diverse audiences" as an issue of strategic importance. This has resulted in national program reporting indicators on the composition of stakeholders. The National Program Leaders consider this progress to change the score of 2.0 to 2.5.
2) <u>Quality, Significance</u>: The ECOP Forestry Task Force and the National Program Leaders in this portfolio have provided strategic guidance for the RREA program by reviewing current issues that necessitate an education approach, how the funds are allocated, and making recommendations for investments in projects of nationwide importance via the National Focus Funds. This has resulted in a plan that includes formula funds that are focused on a very large range of issues. The National Program Leaders consider this progress to change the score of 2.0 to 2.5.
3) <u>Under Performance, Agency Guidance</u>: The RREA strategic plan for FY 2005-2009 was published in April 2004. The plan was a direct outcome of a strategic planning effort that involved nearly 100 people from more than 45 land grant universities. In May 2004 the ECOP Forestry Task Force and NPL's conducted an RREA Workshop to introduce, review and discuss the strategic plan. Implications for changing existing programs, how to implement the plan with no additional funding likely, and the potential for partnerships with NGO's and others were discussed. The National Program Leaders consider this progress to change the score of 2 to 3.

VI.   Summary

The portfolio has identified a few areas where progress was achieved in 2004 that merit an increase in its score. There have been, however, significant changes in terms of strategic planning and implementation that will result in more significant outcomes and impacts in the years to come. The National Program Leaders have been in the process of planning its overall approach to the portfolio even before the external review and these plans are now in the process of final stage of development and will son be implemented to achieve the goals of the portfolio.

The Environmental and Natural Resources (ENR) enterprise will employ three integrative strategies that will guide its National Program Leaders in establishing priorities, identifying opportunities, and designing new programs and activities. This will cut across all related CSREES programs and activities, and each is critical to accomplishing CSREES's Strategic Goal to "Protect and Enhance the Nation's Natural Resource Base and Environment" (Strategic Goal 5).

1. Develop Intellectual Capacity

ENR programs will invest in projects that enhance individual and collective capacity to discover, learn, create, and identify problems and formulate solutions with respect to the principles and needs of our partners and stakeholders. This strategy will develop a competitive agricultural workforce. In all of ENR's research programs, developing new knowledge will incorporate educating and mentoring students, and informing the public through outreach.

2. Integrate Research, Education and Extension

ENR programs will invest in activities that integrate research, education and extension, and that develop reward through effective integration at all levels. Programs will also ensure that the findings and methods of research are quickly and effectively communicated in a broader context and to a larger audience. This strategy is vital to the accomplishment of its strategic goals.

3. Promote Partnerships

ENR programs will promote collaboration and partnerships between disciplines and institutions and among academe, industry and government to enable the movement of research, education and extension throughout the public and private sectors. ENR partnerships will optimize the impact of research, education and extension on the economy and on society through its stakeholders.